



Human Adaptation & Countermeasures Office



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Adaptation & Countermeasures Office Functions/Responsibilities

- Understand the human response to space flight
- Deliver countermeasures (certified mitigation technologies and processes)
- Integrate and implement all biomedical research (basic, applied, operational, and clinical)
- Manage/develop space flight and space flight analog biomedical experiments
- Manage/coordinate/implement all adaptation and countermeasures grants and contracts
- Contribute to advanced technology development efforts



Human Adaptation & Countermeasures Office

Support Staff

*Space
Medicine* →

Clinical/Operational Research Group

Clin/Op Research Projects

Integrated Product Teams

Integrated Testing Regimen

NAR Investigations Mgt.

Biomedical Research Group

NRA Investigations Mgt.

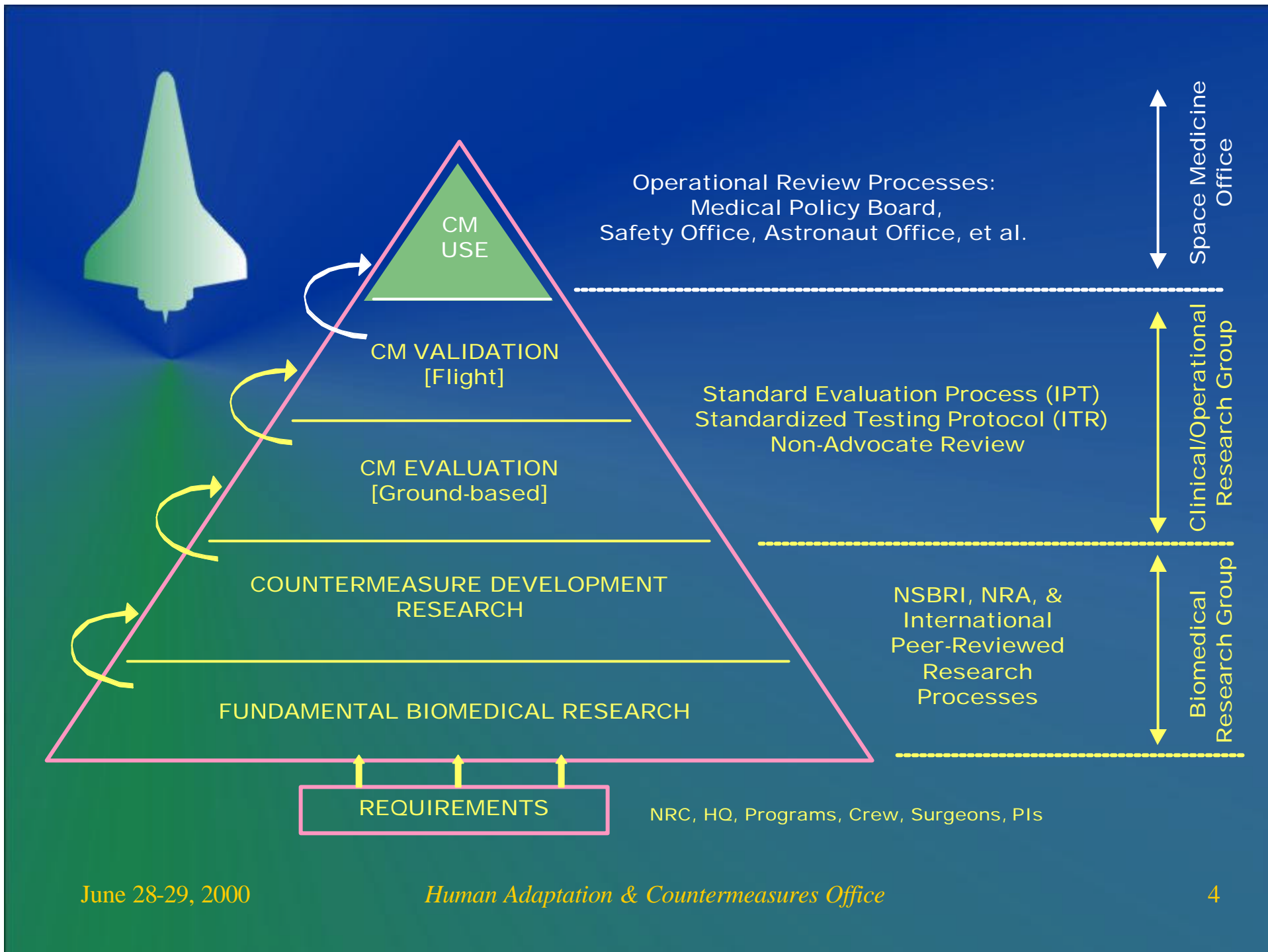
NSBRI Investigations Mgt.

Intramural Laboratories

Discipline Working Groups

MIO: Flight Experiment/Payload Development/Integration

Human Adaptation & Countermeasures Office





Biomedical Research Group Functions/Responsibilities

- Oversees overall Biomedical Research program
 - Maintains NASA/NSBRI Discipline Working Groups
 - Tracks all NRA, NSBRI, IP, and Russian investigations
 - Reviews/updates critical path research plan
 - Recommends NRA and NSBRI solicitation language
- Manages all NRA grants and contracts
- Manages implementation of all flight experiments
- Manages JSC intramural research laboratories
- Provides experiment/mission/increment scientists



Biomedical Research Group

Manager: TBD (NASA/NSBRI)

Deputy: TBD (NASA/NSBRI)

Program Management

NRA Grants/Contracts Mgt.

Flight/Analog Experiment Mgt.

Discipline Working Groups

Intramural Research Labs

Biobehavioral
Barophysiology
Bone
Cardiovascular
Immunology/Cell Science
Microbiology
Muscle & Exercise
Neuroscience
Nutritional Biochemistry
Pharmacology
Radiation

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Clinical/Operational Research Group Functions/Responsibilities

- Coordinates all clinical/operational research project activities
- Recommends/prioritizes all flight, flight analog, and ground-based clinical/operational research experiments (SMOs)
- Reviews results from all flight, flight analog, and ground-based clinical/operational research experiments (SMOs)
- Manages discipline-specific and integrated IPTs
- Develops and maintains ITR; manages ITR database



Clinical/Operational Research Group

Manager: N. Cintron

Deputy: C. Lundquist ==> CPP

Infrastructure

Integrated Product Teams

Integrated Testing Regimen

Analog Facility Support

Space Medicine Projects

CCCDP

CHMRM

A&CM Projects

CM Evaluation/Validation Project

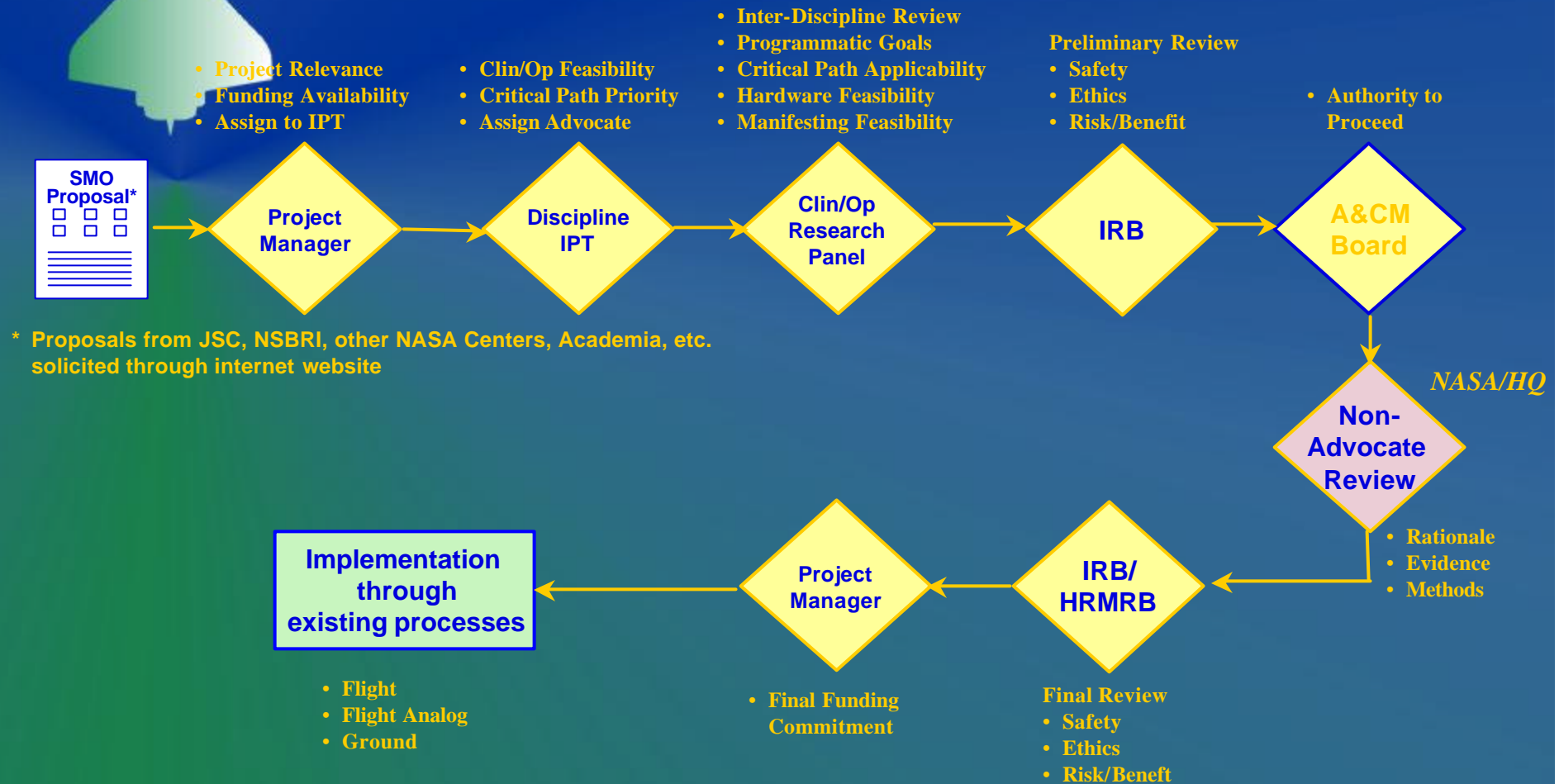
Prebreathe Reduction Project

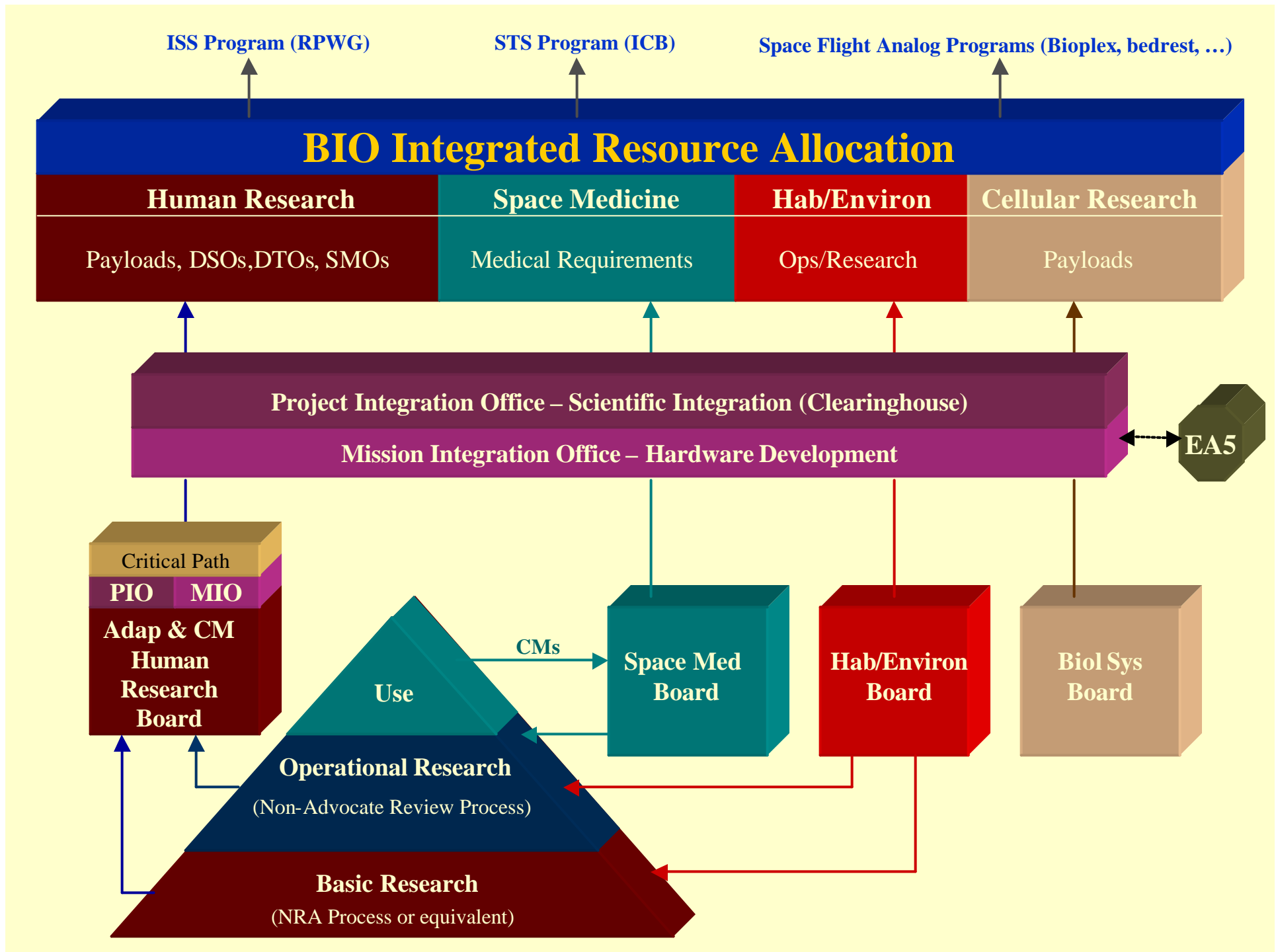
Exercise CM Project (future)

Artificial Gravity Project (future)

Human Adaptation & Countermeasures Office

Clinical/Operational Research Process

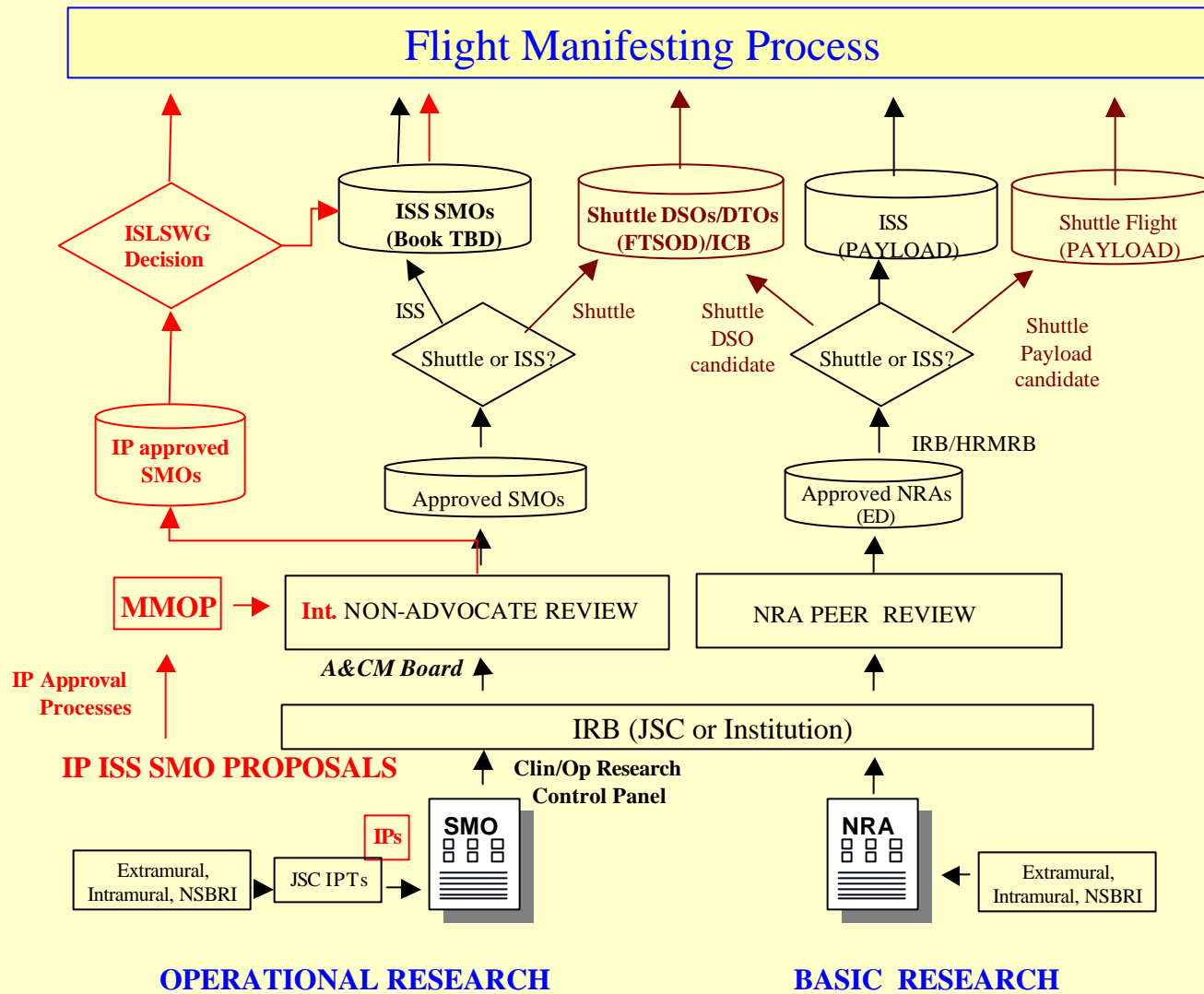




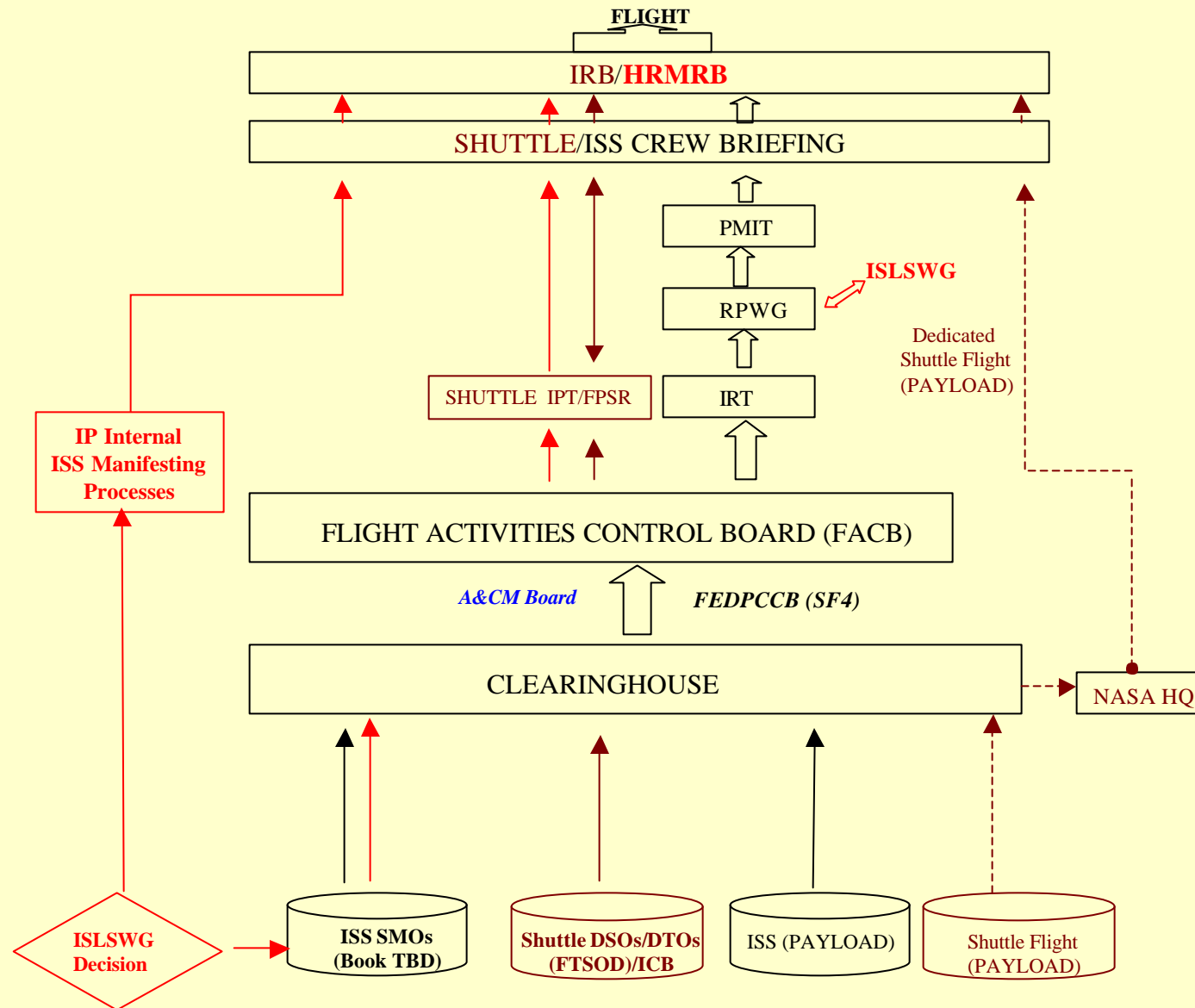


Backup Slides

Flight Research Solicitation & Approval



Flight Research Manifesting Process





A&CM Office Support Staff Functions/Responsibilities

- Technical Assistant
 - Overall A&CM resource integration (deliverables, schedule, budget)
- Administrative Assistant
 - Coordinates A&CM administrative assistance for travel, personnel, space, special events
- Budget Analyst
 - Tracks all A&CM funding and expenditures
 - Develops POP and TCR submits
- Grants/Contracts Specialist
 - Provides administrative support to development, implementation, and completion of all A&CM grants and contracts
- Secretarial Team
 - Provides secretarial support to all A&CM personnel



Experiment/Payload Development/Integration Functions/Responsibilities

- Experiment Level (DSO/DTO, SMO, Payload)
 - Evaluate engineering, cost, and management aspects of space flight and space flight analog proposals
 - Manage flight and flight analog experiments: definition, development, and implementation
 - experiment costs and schedules (serve as COTR when required)
 - pre-, in-, and post-flight/campaign experiment resource allocations
 - crew training, ops planning, and experiment implementation
 - Represent off-site experiment PIs at boards, reviews, etc.
- Mission/Increment/Campaign Level
 - Recommend mission/increment/campaign manifests
 - Manage mission/increment/campaign manifests
 - Represent BIO manifests at program boards, panels, working groups, etc.